

APPLICANT ARGUMENTS OR REMARKS

Claims 11 – 64 are now in the application. Claims 11- 14, 16, 18-22, 29, 32-34, 41 and 50 are amended. Claims 11 and 41 are independent claims. Claims 51 – 64 are newly presented.

Notice of Non-compliant Response

The Legal Instruments Examiner considered our amendments to the claims filed on January 16, 2008 non-compliant because there was no listing of claims 1-10 that had been cancelled.

Claims 1-10 are now included in the listing of claims as cancelled claims.

Applicant submits that the amendments to the claims are now in compliance with 37 CFR 1.121. Applicant, therefore, requests that the Notice of Non-compliant Response be withdrawn and the pending claims be allowed.

Summary

Therefore in view of the foregoing amendments and remarks, applicant respectfully requests entry of the amendments, favorable reconsideration of the application, withdrawal of all rejections and objections and that claims 11-64 be allowed at an early date and the patent allowed to issue.

Respectfully submitted,

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Appendix A: Clean version of claims 11 and 41 for convenience

Claim 11 (Clean Version): A method for reconstructing a three-dimensional scene using a reconstruction device including a light source, an optical system and a hologram encoded on a hologram-bearing medium having a matrix of cells; the hologram-bearing medium and optical system being illuminated by the light source; the method comprising the steps of:

- (i) the optical system generating a Fourier or inverse Fourier transform of the hologram encoded on the hologram-bearing medium at the image plane of the light source;
- (ii) providing a viewing window in the image plane of the light source, the viewing window being the location where an observer places at least one eye to view the holographic reconstruction representing the three-dimensional scene, the size of the viewing window being no larger than a single diffraction order of the light diffracted by the hologram-bearing medium;
- (iii) encoding the hologram on the hologram-bearing medium to reconstruct a given object point, when seen from the viewing window, in only a limited region of the hologram-bearing medium, so that the Fourier or inverse Fourier transform in the viewing window is restricted to a single diffraction order of the light diffracted by the hologram-bearing medium; and
- (iv) forming the holographic reconstruction of the three-dimensional scene within a reconstruction frustum stretching between the hologram-bearing medium and the viewing window.

Claim 41. (Clean version) A reconstruction device for reconstructing a three-dimensional scene including a light source, an optical system and a hologram encoded on a hologram-bearing medium having a matrix of cells; the hologram-bearing medium and optical system being illuminated by the light source; in which:

- (i) the optical system generates a Fourier or inverse Fourier transform of the hologram encoded on the hologram-bearing medium at the image plane of the light source;
- (ii) the hologram encoded on the hologram-bearing medium to reconstruct a given object point, when seen from a viewing window, which is in the image plane of the light source and is where an observer places at least one eye to view the holographic reconstruction representing a three-dimensional scene, is encoded in only a limited region of the hologram-bearing medium, so that the Fourier or inverse Fourier transform at the viewing window is restricted to a single diffraction order of the light diffracted by the hologram-bearing medium; and

(iii) the device forms the holographic reconstruction within a reconstruction frustum stretching between the hologram-bearing medium and the viewing window.